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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,748	02/07/2002	Richard Ferencz	PGI 40020-B	3884

32116 7590 01/30/2004

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER  
500 W. MADISON STREET  
SUITE 3800  
CHICAGO, IL 60661

EXAMINER

AFTERGUT, JEFF H

ART UNIT PAPER NUMBER

1733

DATE MAILED: 01/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/072,748

Applicant(s)

FERENCZ ET AL.

Examiner

Jeff H. Aftergut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

*Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method for providing a web of thermoplastic filaments (delete reference to the apparatus in the title as presented).

*Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 15, 18, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Zeldin et al (US 5,225,018).

Zeldin et al '018 taught that it was known at the time the invention was made to form a spunbonded web of thermoplastic filaments by performing the sequential steps of feeding (transporting) spun thermoplastic filaments through a transport means including transporting tubes 12 with high speed air to a fiber transfer tube exit at 16 and delivering the fibers from the exit 16 of the transport tube 12 to a filament transfer channel 22 having an exit 24. the tapered width of the filament transfer channel 22 in the direction of filament flow acts to direct the high velocity of air toward filament transfer channel exit 24 to minimize turbulence which can cause entanglement of individual filaments, column 5, lines 7-11. the filaments are not deflected in the zone as the tape follows the direction of travel of the filaments from the tubes.

With regard to claim 18, note that Zeldin '018 required that the filaments be fed to the confinement zone through transport tubes. Regarding claim 21, note that the filaments were transported with high velocity air. Regarding claim 22, note that the reference suggested that the filaments would have been deposited upon a conveyor disposed below the confinement zone.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15-19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeldin et al (US 5,225,018) in view of Zeldin et al (US 5,292,239).

Zeldin et al '018 is discussed in detail above in paragraph 3 and applicant is referred to the same for a complete discussion of the reference. The reference failed to teach that the confinement zone would have incorporated slot through which the filaments passed prior to the application of the electrostatic charge thereto. It should be noted that in Zeldin et al '018 after exiting the channel at 24 the filaments were subjected to a charging operation. Additionally, it should be noted that the operation of Zeldin '018 provided a zone of non-turbulent air to prevent premature tangling of the filaments (provide filament separation), however there is no indication that one would have desired to maintain this zone of non-turbulent high velocity air in order to impart some other property to the filaments in the drawing operation.

Zeldin '239 suggested that those skilled in the art at the time the invention was made would have incorporated a slot through which the filaments were transported which incorporated

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non-turbulent air flow in order to impart uniform denier upon the filaments as well as uniform tensile properties, see drawing unit 15 and column 1, lines 39-45 of Zeldin '239. Clearly, incorporation of the non-turbulent flow of air with a slot in Zeldin '018 would not only have satisfied the formation of the zone 24 at the exit of the channel, but it would have provided one with separate filaments which had uniformity in tensile strength and denier which would have been desirable in a spunbonded web. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the slot drawing unit 15 of Zeldin et al '239 at the end of the channel in Zeldin et al '018 as such would have provided one with superior filament separation as well as uniformity in filament denier and tensile strength in the finished spunbonded web.

Regarding claims 16 and 17, the reference to Zeldin et al '239 suggested the specified slot geometry as defined having the specified walls. Regarding claim 19, note that the walls in Zeldin et al '018 taper down to provide the non-turbulent airflow at exit 24. regarding claim 23, note that Zeldin '239 suggested that after deposition the filaments were joined using any well known joining technique, column 1, lines 23-25, column 5, lines 40-43.

6. Claims 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 5 further taken with Trimble et al.

While Zeldin '018 provided a corona discharge device at the exit of the assembly to charge the filament to provide additional separation of the individual filaments, the reference did not provide the discharge device at the exit of the slot in the drawing assembly. However, in spunbonding operation, subsequent to drawing the filaments and separation in a slot drawing operation, it was known per se to include a corona discharge device at the exit to the slot as

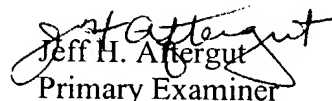
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evidenced by Trimble et al, see slot attenuator 17 and corona device 18 of Trimble. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an electrostatic charging device at the outlet of the slot (note that Zeldin '018 provided such a device at the exit of the attenuator) as suggested by Trimble et al in order to further separate the filaments into individual filaments in the operation of forming a spunbonded web as set forth above in paragraph 5.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

  
Jeff H. Aftergut  
Primary Examiner  
Art Unit 1733

JHA  
January 21, 2004